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By ERNEST R. ROOT, Editor Gleanings in Bee-Culture.

Bee-Keepers and Supply Manufacturers—

By DR. C. C. MILLER.

Foul Brood in the Apiary—

By WM. McEVoy, Foul Brood Inspector of Ont., Canada

Advanced Methods of Comb Honey Production—

By S. T. PETTIT, of Canada.

Migratory Bee-Keeping—

By H. E. HILL, Editor American Bee-Keeper.

The Scientific Side of Apiculture—

By C. P. DADANT.

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By S. A. NIVER, of New York.

Best Method for Creating and Maintaining a Market for Honey—

By HERMAN F. MOORE.

First Half Century of Bee-Keeping in America—

By HON. EUGENE SECOR, General Manager United States Bee-Keepers' Union.

The Apiary on the Farm and in the Orchard—

By HON. E. WHITCOMB, Supt. Apiary Department Trans-Mississippi Exposition.

Needs of Bee-Culture in the South—

By DR. J. P. H. BROWN, of Georgia.

General Advice to Bee-Keepers—

By REV. E. T. ABBOTT, of Missouri.

The Relation Existing between the Apiary and the Successful Production of Fruit—

By G. M. WHITFORD, of Nebraska.

The foregoing List of Special Articles represents a part of the program at the Omaha Convention. Many of the subjects will be followed by much helpful discussion. Of course, many other interesting and valuable contributions will be found in the American Bee Journal during the 10 weeks' "trial trip," besides the other regular departments. But in order to secure all the above articles, the trial subscriptions should be sent in promptly.

Every Bee-Keeper in America ought to have the old American Bee Journal for 10 weeks from Oct. 1, 1898, and right along thereafter. It will be worth to any one of them many times its full year's subscription price. Send 10 cents Now, anyway, and get it for the next 10 weeks.

Invitation to Our Regular Readers:

We trust that our present subscribers will send the names and dimes of their neighbor bee-keepers, or get them to do it. Show them this liberal trial-trip offer. They should jump at such an opportunity to get 160 large pages of the best bee-literature for only 10 cents!

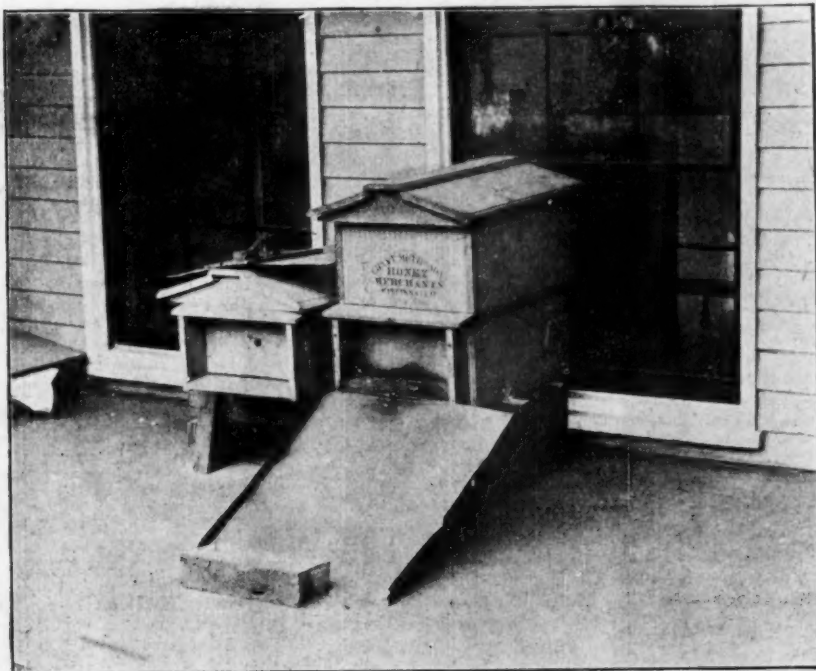
GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

CONTRIBUTED ARTICLES

City Bee-Keeping Pleasurable and Profitable.

BY JOHN R. SCHMIDT.

The thought of keeping bees in a city naturally makes one think it is only an experiment, and that no profit can be derived from it. It has been proven, nevertheless, that it is no longer an experiment, but can be made a source of pleasure and profit. Just as poultry-keeping is taken up by some city people as a source of recreation and a means of relieving their minds from the business cares, bee-keeping is also rapidly finding favor among a large class of people who find



A City Roof-Apiary.

pleasure in spending their holidays and idle time among their bees.

What a source of pleasure and recreation it is, after returning from the busy city at the close of a hot summer's day, and as one passes among the white hives, sees the bees standing thickly at the entrances busily engaged in evaporating the new honey which they have gathered during the day. What could please the bee-keeper more than to find, on turning back the cover of one of the supers, there exposed to view so many completed sections filled with snow-white comb honey, which he knows will find a ready sale at 15 to 20 cents a pound? This is the pleasure and profit which a city bee-keeper derives from his bees, and the chief source of making city bee-keeping so popular.

THE LOCATION.

Almost all bee-keepers of Cincinnati are located in the Ohio valley on the outskirts of the city and on the hilltops, but some of the enthusiastic bee-keepers actually keep bees on housetops in the very heart of the city. A photograph of this curious way of keeping bees is here shown. It was taken from the roof of Chas. F. Muth & Son's store, and this apiary once numbered 40 colonies, but at present there is only one full colony.

Mr. Muth said: "These bees yielded a surplus of about 60 pounds of comb honey during a good season, and always wintered without any loss." This apiary is located on a tin roof about a hundred feet from the ground, and is protected from the hot sun by a small roof which is not shown in the photo-

graph. The bees can only forage in one direction, and to reach this they are compelled to cross many housetops.

There are some apiaries which contain about 50 colonies a few miles from the city, but these cannot be classed among our city apiaries, so I will not describe them.

The apiaries located in the valley and on the hills are small, the number of colonies rarely exceeding 12; these small apiaries are quite numerous, there being about 75 colonies within one mile of my apiary.

The hive almost universally used by the bee-keepers here is the 10-frame Langstroth, the 8-frame hive having been tested by some, and found to be too small, as the bees almost invariably swarm during the latter part of April, just when the strength of the colony should be kept together as they are about to enter a period of about three weeks during which no honey can be gathered.

The hives are arranged in a long row generally running parallel with some fence or wall, and have from one to three feet of space between each hive; but this all depends upon the amount of space which can be given the bees, as often they are crowded together with no space between the hives, all manipulations being done from the rear. The picture will convey the idea. (See next page).

SOURCES FROM WHICH BEES GET HONEY.

The first honey brought in by the bees is from the fruit-bloom; this stimulates them to active brood-rearing, and where small hives are used the bees often swarm. Then comes a period during which the bees gather no honey at all, which lasts about three weeks, then white clover begins to bloom, followed closely by the sweet clover, which is the chief honey-plant in this locality, and the only one from which surplus honey is derived.

The colonies are by this time very strong, having been stimulated by the fruit-bloom, and now prevented from swarming by the lack of honey coming in between the fruit-bloom and the main flow. When the season is fairly started, the bees are given an abundance of room, and the way they go to work in the supers is astonishing. They gather about 65 pounds of comb honey per colony during a good season, and several times I have had a few colonies which doubled the amount. All of this honey is gathered during the short period of about four weeks, after which there is just enough honey coming in to fill the hives nicely for winter.

Comb honey is the chief product of the city apiarists. It can be produced as one of the very best articles, or one of the very worst, just by the length of time it is left on the hive. If the bees are closely watched, and the sections taken out as soon as they are finished, the combs have the most beautiful, snow-white appearance, but if they are left on until the end of the season, the combs almost rival the appearance of some old brood-combs.

Extracted honey is produced by some, but the honey in this form is generally dark, and does not find as ready sale as that in the comb. The only advantage of producing the honey in this form is the increase in the surplus, and that the bees can be kept from swarming by transferring all the combs except the one with the queen to the upper story, and filling the lower story with empty combs or foundation. This is a very good plan when one is compelled to be absent from home all day, which is generally the case with many city bee-keepers. This plan certainly does avoid having many swarms which would otherwise stray away before they could be hived.

The city bee-keeper has no trouble in selling his surplus honey. The people are suspicious of all honey sold at the groceries, and often come to me and say: "I like your honey because I know it is pure, and it tastes different from that which I get at the store." I suppose they like it, and know it is pure because they see me remove it from the hives. This is one of the best ways to advertise your honey when you live in a densely populated section. I find it works every time.

Extracted and comb honey sells for the same price. Some would rather pay more for the extracted honey, but I am satisfied to sell it at the same as the comb.

The bees are all wintered on the summer stands, and have very little protection, which consists chiefly in a piece of bur-

lap and a straw mat, or 3 or 4 inches of carpet placed over the brood-frame. This is prevented from coming in contact with the frames by pieces of wood placed crosswise so there will be a space of about 3 inches in which the bees cluster, and also use as a means of access to the other combs.

One bee-keeper gives his bees no protection whatever. He winters them on 10 Langstroth frames, which contain about $\frac{3}{4}$ sealed honey, and covers these with three $\frac{1}{4}$ -inch covers, which often do not fit, leaving large openings through which the warmth may escape. Strange to say, these bees go through the winter without any loss, and many colonies are just as strong in the spring as those which received the best of care. Last winter one of the colonies wintered without the three $\frac{1}{4}$ -inch covers, the combs being entirely exposed on the top, the rain and snow being kept out by an ordinary empty extracting-super upon which was placed a ventilated cover raised about two inches to let the moisture escape. I think this proves beyond a doubt that bees do not freeze, but starve to death, as the thermometer several times registered below zero, and for weeks it was almost as cold.

Hamilton Co., Ohio.



Peddling Honey—Not Favored by All.

BY ADRIAN GETAZ.

Mr. Thompson, some time ago, related his experience in peddling honey from house to house, and attributed his failure to his lack of ability. Well, I am not sure that his lack of ability was the cause of his failure—too many other circumstances have a bearing upon the question. A good deal depends upon the class of people living in the city. Working-men and employees generally have little money at home, buy on credit, and pay when pay-day comes. The time of the year has a great deal to do with the selling. During the fair season so much fruit and vegetables of all kinds are on the market that there is but little demand for something else. In the winter, when nothing but meat and potatoes, almost, so to speak, are to be had, then honey for a change is welcomed. Again, during the latter part of the summer the farmers bring all their honey and sell it for whatever they can get. Many families buy what they think they will need during the year,

Thompson did. On the other hand, if I started in the winter, say after the middle of January, I would not have any trouble in selling any amount of honey that way.

Most of my peddling, however, has been done by the lady who owns the place where one of my apiaries is. As she peddles her farm products all the time, and has a number of regular customers, it is easier for her to dispose of it than it would be for me, that is, when the peddling is done regularly all the year around. Besides, the cost of time is reduced considerably, as she would have to go anyhow to dispose of her own farm products.

Taking all into consideration, I am not much in favor of peddling. It takes too much time compared to the amount sold, and the difference between the price obtained and the price paid by the grocers is too small to make up for the time lost. As I have said before, I prefer to sell directly to the grocers, either on commission or straight sales, whichever they like the best.

Knox Co., Tenn.



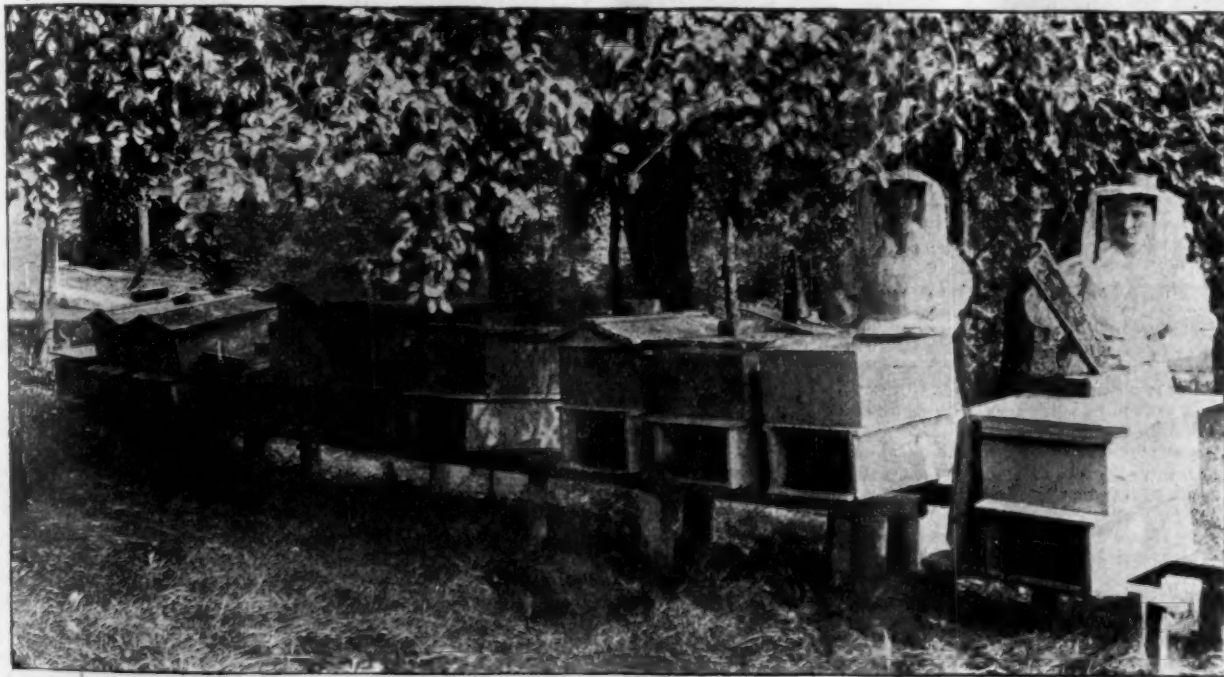
Bee-Chat, or Various Notes and Comments.

BY HERMAN F. MOORE.

BEE-KEEPING IN CUBA.—I notice that O. O. Poppleton makes some references to his bee-keeping experiences in Cuba that are intensely interesting. Among other things, that he kept 400 colonies, etc. Now, Mr. Poppleton, take this for a subject, "Bee-Keeping in Cuba as Seen by One of the Bees," and open wide up and give us all the details, such as you know will interest all bee-keepers, and especially now when Cuba and her possibilities as an American State are in the world's eye.

HONEY-PRICES COMPARED.—It will be interesting at this time to compare the prices of honey that obtained in 1890 with the current prices of the last two years. In June, 1890, Mr. Burnett said there was less honey on the market than any time for seven years, and quotes "choices at 13 to 14 cents."

In July, a Kansas City commission merchant prices "very nice white one-pound sections put up in handsome 12-pound white wood packages at 15 to 16 cents."



An Apiary in the City of Cincinnati, Ohio.

and thus take advantage of the low prices. Many times, however, their calculations are short, and they are "out" before the winter is over.

If I were to start peddling at this time of the year, right here at home in competition with all the good things that are on the market, and the tubfuls of masht combs brought by the mountaineers, I would meet with a worse failure than Mr.

The latter part of July a Columbus, Ohio, dealer said: "Honey is scarce, and selling at 17c. for choice white clover."

In September, an Albany, N. Y., commission merchant quoted, "white, selected, 18 to 20 cents."

In September, Mr. Burnett said: "Comb is now held firmly, and sales are now being made at 17 to 18 cents for best grades of white."

In an October number of a bee-paper I see this advertisement: "For sale, 25,000 pounds of the finest honey in scant one-pound sections in 12-pound cases, a very fancy lot. The price is 20 cents a pound on board cars here. Who wants the lot?"

In November the Columbus, Ohio, dealer said: "Honey is scarce and in demand at 18 to 20 cents for nice white clover."

December 15, 1890, the Roots quote as follows: "White sage, one to three 60-pound cans, 11 cents a pound. Choice white comb 1-pounds, one to three cases, 20 cents a pound."

Can we draw a moral from these prices that prevailed in 1890, nearly twice as much as producers obtained in 1896 and 1897, when they dumped their crops wholesale on the market? Doesn't it seem as if a better distribution of honey was the answer to all, or nearly all, of the apiarists' troubles? Isn't personal work with the consumer, by as many of the producers as possible, the way to get a big price for our product?

Look at the prices that prevailed in the wholesale trade all over the country in 1890. Didn't a large proportion of the consumers pay 25 cents a pound for their honey?

By a certain statistical table I am informed that there are 300,000 bee-keepers in the United States, and a total production of 100,000,000 pounds of honey. Suppose our population is 75,000,000 persons, and half the people never eat honey at all, this only gives 2½ pounds of honey per year to each eater of honey on an average. Doesn't this seem like a demonstration that we should get 30 cents a pound for our honey when properly distributed, if it is as scarce as that? Is there any impossibility in getting at least 20 cents a pound for all the good table honey in the country, if properly sold to the consumer?

NON-SWARMING BEES.—Why can't we get down to some hard work along the line of a non-swarming strain of bees? All seem to agree that to give lots of room and prevent swarming will give the largest amount of surplus honey. I think Mr. Doolittle has written some along this line. Can't we breed by selection, and practice dividing for increase, and in a few years have strains of bees and queens that have almost no desire to swarm, if given abundant storage-room? It would not be well to breed the swarming impulse entirely out, for then the rearing of queens might go with it, except for supersedure.

FOUL BROOD.—The question of foul brood and ways and means of spreading it is becoming a matter of very great interest. Will Mr. McEvoy and Mr. France arise and tell us how to assure ourselves that when buying queens or bees we are not also buying a bad case of foul brood? If it is true, as a certain writer claims, that fully 40 percent of the colonies of the country are infected, it is the most serious matter that confronts us at present. Can we write to the foul brood inspector of a certain State and enquire if he can or will give a clean bill of health to the particular bee-keeper of whom we wish to purchase? One colony or one queen may be the means of ruining an entire apiary. We might require a written guarantee or certificate from any one dealing in bees and queens that they had no foul brood in their colonies. Then in case of a loss there would be a legal remedy if the seller is financially responsible.

SELLING ADULTERATED HONEY.—Should wholesale grocers and honey-bottlers all over this country be allowed to sell adulterated honey with "pure honey" on the label? Of course not; but how to prevent them—ah, there's the rub! In many of the States all that is necessary is to prosecute them under the laws as they exist. In many of the States the only lack is in the enforcement of the law, and not in the law itself.

The associations of bee-keepers, to which must naturally fall the duty of seeing to the enforcement of pure food laws as they relate to honey, may well learn a lesson from the maple sugar associations of Vermont and Ohio in these matters. These associations have been seeing to the amending of the laws and the enforcing of them for years with good effect. In Ohio a pure food commissioner has been selected who gives his whole time for a salary to the work of prosecuting adulterators and examining samples of suspected foods.

The Illinois law is an ironclad law, and yet Chicago is the great hotbed of impure foods of every kind and character on the face of the earth. Look at the law as the Chicagoans have it laid down to them in the statutes:

CRIMINAL CODE OF ILLINOIS.

"SEC. 473.—No person shall mix, color, stain or powder any article of food, drink or medicine, or any article which enters into

the composition of food, drink or medicine, with any other ingredient or material, whether injurious to health or not, for the purpose of gain or profit, or sell or offer the same for sale, or order or permit any other person to sell or offer for sale any article so mix, colored, stained or powdered, unless the same be so manufactured, used or sold, or offered for sale under its true and appropriate name, and notice that the same is mixt or impure is marked, printed or stamped upon each package, roll, parcel or vessel containing the same, so as to be and remain at all times readily visible, or unless the person purchasing the same is fully informed by the seller of the true name and ingredients (if other than such as are known by the common name thereof) of such article of food, drink or medicine at the time of making sale thereof or offering to sell the same."

"SEC. 475.—Any person convicted of violating any provision of any of the foregoing sections of this Act shall, for the first offense, be fined not less than twenty-five (\$25) nor more than two hundred dollars (\$200); for the second offense he shall be fined not less than one hundred dollars (\$100), or more than two hundred dollars (\$200), or confined in the county jail not less than one month, nor more than six months, or both, at the discretion of the court; and for the third and all subsequent offences, he shall be fined not less than five hundred (\$500), nor more than two thousand dollars (\$2,000), and imprisoned in the penitentiary not less than one year, nor more than five years."

What a rattling of dry bones would there be, my countrymen, if an organization with grit and money should take up the prosecution of adulterators under such a law as that!

Some think a National law is the only thing that will fill the bill. The way to get a National law, and get Uncle Sam to enforce it, is to enforce the local laws, and so educate public sentiment that a general law covering the whole country will be demanded.

This is "the land of the free and the home of the brave," and I for one demand the freedom to know absolutely what is in everything I buy out of the store or elsewhere. If salicylic acid is used in my corn and tomatoes, I want to know how many grains to the quart. If oats is in my pepper, I, who pay the bill, have a right to know what percent. If my honey is part glucose, I the consumer have a right to know whether one-fourth or three-fourths, and so on through the list.

If the names of all the ingredients are printed on the outside of a package I can spend my money for it or not, as I choose; but to label a can "pure pepper" when half is something else, or "pure honey" when part is glucose, is a fraud, and is a lie and a theft, if I part with my money for them supposing them to be pure.

The one great reason why those interested in bees move so slowly toward any given point is that so few of them realize the importance of association and combination. Suppose 300,000 are keeping bees in the United States. Not more than 25,000 of them take a bee-paper, and not more than 2,000 are members of an organization to forward bee-keepers' interests. Let the apiarists combine, as do the brewers, the dairymen, the grocers, and others, and there is hardly any result that cannot be attained, that is for their interests.

Cook Co., Ill.



Boiling Foul-Broody Honey for Feeding.

BY DR. C. C. MILLER.

The following paragraph appears in the Bee-Keepers' Review for September:

"Dr. Miller, to the question, Could I safely feed it [honey from a colony having foul brood] by boiling? replies: 'Put water with it, bring it to a boil [sic], then after it comes to a boil [sic] keep it boiling for two hours and a half.' The Italics are his. Was the Doctor in a playful mood? That would be hard on the bacilli unless plenty of water were added. I consider 15 minutes boiling sufficient; having first added an equal amount of water."

I wish I knew what Mr. Taylor means by that word "sic." Coming as it does twice after the word "boil," it looks as if he might be objecting to the use of that word, but as I know of nothing incorrect in the word, or the way in which it is used, I shall be obliged to him if he will tell what he means by saying "sic."

Mr. Taylor says: "I consider 15 minutes, boiling sufficient." I might reply, "I do not consider 15 minutes boiling sufficient." Pitting one statement against the other, the first has by far the greater weight, for Mr. Taylor knows vastly more than I do about foul brood, and it is right that I should give some reason for insisting on more than 15 minutes boiling.

Dr. Wm. R. Howard, in his pamphlet on "Foul Brood," reports some experiments upon the point in question. Tubes of liquid gelatine containing spores of bacillus alvei were placed in an open vessel of boiling water. The contents of a tube thrust in boiling water would of course come very nearly to a

boil. The spores were not all killed until after 45 minutes. Dr. Howard's concluding words on this point are "that boiling for an hour would destroy their vitality."

Still later I saw a report of experiments upon the same point. I am sorry to say I cannot say where, but I think they were experiments made under the auspices of the Canadian government, and reported in the Canadian Bee Journal. If my memory does not play me false, spores grew after being kept at the boiling-point nearly two hours and a half.

Under the circumstances I would not feel justified in advising less than $2\frac{1}{4}$ hours boiling. Even if 15 minutes is sufficient, $2\frac{1}{4}$ hours is still safe, and Dr. Howard's experiments lead to the belief that in at least some cases 15 minutes time is not sufficient.

McHenry Co., Ill.



The Queen-Excluder and Its Inventor.

BY F. GREINER.

In his Straws for July 15, Dr. Miller makes mention of the inventor of the queen-excluder, Fr. A. Hannemann (wrongly spelled Hahnemann). This brings to my mind vividly what Mr. H. wrote in the German papers during the years 1875, '78, '79, about this invention and the general management of his bees; and altho about 20 years have past since then, what he said may still be of interest to the readers.

If my memory serves me aright, nothing has ever appeared in relation to the subject in our bee-literature here, so I will speak of Mr. Hannemann, try to give the essentials of his management, and mingle with it some facts and the experiences of others as opportunity may present.

When Mr. Hannemann wrote his last report for the *Bluten-Zeitung*, in 1879, he was then a bee-keeper of 30 years' experience. He had made a specialty of apiculture for 26 years in the extreme southern part of Brazil; had introduced our common honey-bee into that land, and was the originator of modern bee-keeping there.

I did not know that, according to Dr. Miller, Hannemann was a tailor by trade; but it is very evident that he could not have had very much leisure to follow his profession, for he was so extensively engaged in bee-keeping and honey-production that his breeding-stock numbered over 300 colonies, which were allowed to swarm at will. From what I have read on and between the lines it would seem to me that all these colonies were kept in stationary hives, perhaps box-hives, as we call the hives without frames. Hannemann's aim was, in the first place, to have his colonies swarm all they would, and that was all he expected or asked of them. He called them his stock capital. The young swarms were the interest, so to speak, to be exchanged for honey during the honey season. The *how* will be shown later on.

Southern Brazil must be well adapted to bee-culture. Hannemann spoke of his honey season as lasting from two and a half to three months. For six weeks the secretion is so plentiful that bees will not work on any honey offered them in the open air. I think we might be able to show something with such a honey-flow. I have not seen a day like that here in several years, even when I secured a fair yield.

The queen-excluder was invented or gotten up for a different purpose from what we use it for now. Hannemann may have been led to make his invention on account of many young swarms often going together when swarming at the same time, and he wanting to make a sure thing of it to catch all the queens. At any rate, he constructed a sieve with the view of sifting his bees before hiving them, and so the appliance has been named "Hannemann's bee-sieve." In sifting his bees he probably encountered the difficulty of getting the drones and queens mixed together in a heap; and the gain by using just the queen-excluding plate proved insufficient for the accomplishment of his object, so he added another sieve having wider passages, with space between the two. This worked well. It separated and secured queens and drones, allowing the workers to pass through. The latter were hived in the peculiar mammoth hives to be described further on, the drones destroyed, and the queens confined in cages of his own construction.

This brings us to the second use of the queen-excluding metal, for these cages were made of *such* (I wonder that the excluding metal has not been used for this purpose by some of our bee-keepers who practice caging during the honey season). Hannemann wanted his queens caged so as to allow the bees to communicate with them unhampered, hence he made the cages of perforated metal. The unique manner of his management of the young swarms made it strictly necessary to have every queen secured. If possible, all the swarms coming in one day were placed in one single mammoth hive. Mr.

Hannemann speaks particularly of one day in 1879, when he had 79 swarms issue, to be taken care of by himself with the help of his three young children, to be sifted, queens caged, and the bees weighed and hived. One giant hive and two barrels accommodated this enormous "pile" of bees. They gave at the end of the season, net, about 1,600 pounds of honey.

Mr. Hannemann speaks at another time of his "Boss Giant hive" of 50,000 cubic inches, made four stories high, cupboard fashion, with eight hinged doors in the rear, to give access—a hive that harmoniously accommodated 54 kilograms of bees (about 119½ pounds) from which he harvested, at the close of his $2\frac{1}{4}$ months' honey season, 448 kilograms of honey (equal to about 987 pounds), and 38 pounds of wax, reckoning a kilogram as $2\frac{1}{5}$ pounds. In other words, one or each kilogram of bees was exchanged for 8½ kilograms of honey. Of the 14 caged queens but 9 were alive when the honey was cut out.

In 1879 Mr. Hannemann had to take care of 700 swarms (young) in two months. His entire crop amounted to 15,428 pounds of honey, and 1,212 pounds of wax. He stored his honey largely in cemented vats or cisterns. It is astonishing, so adds Mr. Hannemann to his report, to think that so much honey could be produced in one locality, especially when taking into consideration the fact that over 300 breeding colonies used large but (of course) unknown quantities for breeding besides, and storing their winter supplies at the same time. I would add, it goes to prove that Hannemann has a splendid location, perhaps like California or Cuba, altho he says that the *slipshod* bee-keepers complain that bees do not pay any more.

The publication of Hannemann's system created a great stir among the German bee-keepers at the time—probably more on account of the novelty of it than for any other reason, altho, of course, we all appreciate the queen-excluder. I have not heard of any one in Germany who practices the Hannemann system as he did. Mr. H. Guehler, after several years of trial, thinks but little of the excluder for his locality, but values highly the queen-cage constructed *a la* Hannemann. He worked out this system: When the honey season is nicely begun he confines the queens in Hannemann cages, and places them on top of the brood-frames with super, or, as they call it, "honey-chamber," above. The bees, he says, immediately take possession of the super, providing honey is coming in.

When we cage a queen in the brood-nest in an ordinary wirecloth cage, the bees behave but little differently from what they do when the queen is entirely removed. They almost always construct queen-cells over larvae, and the progress in the sections is slow, if, indeed, any work is done at all. This is according to my experience. But when a queen-cage of the Hannemann order is used, and the bees can communicate freely with the queen, they do not seem to be aware that she is caged at all, and Mr. Guehler finds that everything moves along in the hive normally. Queen-cells are not constructed. The combs become heavier and heavier, and the work in the super—that is, comb-building and honey storing—goes right on unless the honey-flow ceases. Guehler thinks it is best to release the queen again after two weeks of confinement, removing at the same time a few of the heavy combs from the center of the brood-nest, inserting comb foundation in their stead. Empty comb does not prove to be a success, as the bees will fill in honey too soon. The bees will draw the foundation into comb just about as fast as the queen can utilize it, and she will at once be ready to enter upon her maternal duties as if she had not been obliged to suspend her work. The bees very readily accept their queen, for in reality they have never been separated from her. Guehler finds that queens come out uninjured by this confinement, prove to be just as fertile, productive, and long-lived as if they had always had their freedom. When carrying the caging plan to excess—that is, confining the queen for an unreasonably long time (in this one case he speaks of, it was five weeks), laying workers made their appearance.

It seems, then, that some German bee-keepers modified the Hannemann system to suit their own environments, or pickt out the valuable features according to their own judgment. I noticed, also, that after the publication of Hannemann's invention queen-cages like this were offered for sale. They consisted simply of a little wooden frame covered with the perforated metal on each side.

Right here I want to add that some of our German friends across the water have adopted at least some features of our methods, our hives and appliances, owing in a great measure, probably, to the efforts made by Mr. Stachelhausen, of Texas, and myself, to enlighten them on the subject of American bee-hives and our general management of bees. Of course,

progress is slow. It seems very hard to give up old methods and adopt new ones. But progress is there. My private correspondence with bee-keepers of Germany establishes that fact beyond a doubt.—Gleanings. Ontario Co., N. Y.

[Concluded next week].



A Little Experience with Bees.

BY CHARLES HOOKSTRA.

I have had quite an experience with bees lately. I went southwest of my home about six miles, and got acquainted with three or four persons who keep about 50 colonies of bees. They are not readers of the bee-papers, and are somewhat behind the times in the latest improvements.

A man came along there about five or six years ago and sold them some newly invented hives, charging them \$5.00 apiece, and they have made no improvements since then. They keep most of their bees in dry-goods boxes, or any box that is convenient when they swarm. A great many go to the woods and are lost.

In the fall, about Oct. 1, they dig a hole in the ground, build a fire and put sulphur on it, then place the hive over the fire to kill the bees in order to get the honey away. I persuaded them this year to let me have the bees and take them away without killing them. I now have two colonies at my home which I took away from the honey they had gathered all summer. I first bored some holes in the box they were in, enough to put the nose of the smoker in; then I turned the dry-goods box bottom side up, and put my hive on top of that, with foundation in, and a cake of honey. I then rapt on the dry-goods box to get them started going up, and I gave them a puff of smoke. I kept this up for about 25 minutes, until I had them pretty well up. Then I placed the hive in the place where the dry-goods box stood, and moved the box away about 50 feet, and the remaining bees I drove out with the smoker, when they flew to the new hive where the queen was, and the work was done.

I let them stand there the next night and day, and the evening of the next day they had started to work. That evening I fastened the hive to the bottom-board, and put mosquito-netting around it and brought them home on the street-cars. I put a paper on the box, and the passengers wanted to know if I had pigeons. I told them I didn't know how many "pigeons" were in the box. I had only to change cars three times with my "pigeons."

I have had the bees at my home two weeks, and they have gathered 30 pounds of honey in the brood-chamber already, and I consider them one of my best colonies. This was a new idea to the bee-smotherers.

Another person gave me a third swarm that was very small. It issued Aug. 21. I took them out of their dry-goods box or "bee-catcher," as the man called it, as it had a handle. They had made quite a bit of comb, being in there three days. I took a wire hive made of screening, and took the little piece of comb that the queen was on and put it into my hive. The other bees I shook into my hive, and brought them home on the street-cars. When I got them home I put them into one of my hives with foundation with a little honey in. The next day I saw they were not strong enough to gather enough honey to keep them this winter, so I took one of my strong colonies and put it beside the weak one, and put peppermint on both hives so as to kill the scent, so they would not kill the queen in the weak colony. I then took a frame of bees out of the strong colony and shook them into the weak one. This worked all right. The next morning I fed the new colony honey so they would get a little acquainted with their new home. It is now the third day I have had them, and they are gathering their winter stores. I now have a pretty strong colony of bees. I believe in saving the last swarms if increase in numbers is wanted.

About two weeks ago I visited Mr. Watson's home, in this (Cook) county, alongside the Desplaines river. It is a beautiful home, surrounded by a natural growth of trees. I had quite a talk with Mrs. Watson about bees. She said they had some "tenants" in the upper part of their house that had not paid any rent, nor had they received any benefit from them for the last four years. The "tenants" are a swarm of bees. They came in between the stone wall and the window-frame in the upper story at the front of the house. They came in a small crack that the builders had left. They then found their way to the inside of the house between the plastering and the stone wall, in a space about 3 inches wide and 10 feet square, which is their hive. When the lady of the house opens the window in the room below the bees come down the pulley holes, and act as if they would like to take possession of the

whole house. The people considered the bees quite a curiosity at first, but they do not think so now.

These bees swarm regularly every year, but the people have not been able to catch any of the swarms. The bees have made the corner of the window-sill black by traveling in and out. There are about 50 colonies in that vicinity, and the bees in the house are supposed to be some of the run-aways. Cook Co., Ill., Aug. 28.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Keeping Combs Filled with Honey.

I have a few extracting-combs filled with honey, and want to keep them for the bees in early spring. How can I keep them away from the bees? In what kind of a room, and what temperature is required? NEW YORK.

ANSWER.—Very likely a warm cellar is the best place you can conveniently have. If you can have a warmer place, all the better. But a cellar that never freezes is better than a room that is much warmer than the cellar in daytime and then freezes at night. The best thing would be a room that never goes below summer heat. It would not hurt the honey to be kept at 90° or 100°.

Sources of Pollen.

Where do the bees get their pollen and bee-bread—from what flowers or shrubs, and what kind of trees and flowers? The reason this question is asked, I would like to plant them, and it would be of interest to me as a beginner. GEORGIA.

ANSWER.—Bees get pollen from white clover, burdock, sweet clover, plantain, buckwheat, maple, pumpkin, apple, muskmelon, poppy, plum, corn, linden, dandelion, mignonette, pear—I think you'll have to excuse me from giving the whole list, for it would take up a great deal of space to give all I know, and very likely your bees get pollen from something I don't know anything about. It is not likely that it would be worth while for you to plant anything specially for pollen. While it is a very important item in Mistress Bee's bill of fare, the probability is that your bees will easily find all they want on the plants already growing.

Work of Wax-Worms—Queenless Colony.

1. Three weeks ago I had a strong colony of bees to abscond, leaving plenty of sealed brood. After the young bees gnawed through, they could not get out, as they were held in by a web at the bottom of the cell where there was a small white worm. The hive was well shaded, and the bees were bringing in nectar. Ants have been between the quilt and cover for some time. I put them into a new hive on full sheets of foundation, and they are doing nicely. What caused them to leave? How can I prevent it, and get rid of the small worms?

2. I notice white dust, or what seems to be chewed wax, on the sections of honey that I have stored away in a warm, dry place. What is the cause, and how can I prevent it?

3. I have a colony of queenless bees. I gave them a frame of eggs and larvae, and instead of starting queen-cells on it, they build queen-cells on the comb where there are no eggs or larvae. If they adopt a worker-bee as a queen, will she lay eggs? What must I do with them? TENNESSEE.

ANSWERS.—As you report the case, it seems to have been a case of swarming, in which the worms and ants had no part. The best remedy for the wax-worm is a strong colony of Italians. Italians seem to be very much better than common bees for keeping out worms. The ants probably do little damage, making their nests about the hive more for warmth than anything else. If no place is allowed about the hive to shelter them where the bees cannot go themselves they will not trouble. I discarded quilts and adopted a plain board cover.

Since then ants don't bother at all, for they have no chance to find a hiding-place from the bees.

2. The white dust is the work of wax-worms that are very small and young. Give them time enough and they'll grow into big, fat worms. Better fumigate the sections with sulphur.

3. Your colony has probably been queenless for a long time, and by this time laying workers may be at work. It is so late in the season that your wise course will be to break up the colony. Indeed, that is the best way at any season, after they have been queenless a long time. If you have a weak colony that has a good queen, you can give it to the queenless colony to strengthen it. If you have no very weak colony, divide the combs and bees around among several colonies that are among your weakest.

How Bees Get Home Again.

I would like to know what Dr. Miller thinks of the following paragraph, taken from a newspaper:

"Bees are said to see an enormous distance. When absent from their hive they go up in the air till they see their home, and then fly toward it in a straight line."

MICHIGAN.

ANSWER.—I don't know anything about it, but I don't believe it. I have a dim suspicion that a bee, bird or animal may have some sense that a man doesn't have. Take a cat and put it in a bag, carry it by a circuitous route farther from home than it has ever been, liberate it, and when you get home you may find it smilingly waiting to greet you at the door. With any sense that you have, you couldn't do a thing of that kind. Hasn't the cat some special sense that you haven't? A carrier-pigeon will find its way home a hundred miles, in a place where it couldn't see half way home. I have some doubt whether a bee is as good as a cat or a pigeon at finding its way home, and it's possible that it finds its way home only as you do. At any rate, if you take a bee five miles from home, in a direction it has never before gone more than a mile, I doubt whether it would find its way home, even if its home is so plainly seen at that distance that you can see it with the naked eye. So I don't have so very great faith in the extra sense belonging to a bee, after all; and when you come right down to it I don't know anything about it.

Cellar-Wintering—Ventilation—Extracting-Frames—Quilt or Board Covers.

1. Can I winter my bees in a storm-cellar? It is 8x12 feet, depth 6 feet, and 1½ feet of earth on top.
2. What is the best way to fix ventilation?
3. Which is the better frame for extracting, 9½ or a half-depth?
4. Which is the better, a quilt or a board over the frames? I use boards, but the bees glue it.

MINNESOTA.

ANSWERS.—1. Very likely it will be a good place to winter, but you can hardly be sure about it till you try. The lay of the land makes a difference about its being damp, etc.

2. For only a few colonies it may need no attention as to ventilation. You can secure ventilation by having a pipe run from near the bottom up through the top, covering so no rain can get in, but still leaving free passage at the top for air. You can make the pipe by nailing together four fence boards, altho very likely a smaller pipe, say three inches square, will be probably as large as is needed. If there is a pipe running up high enough to act like a chimney, there will probably be no need of any special provision for letting in air. Enough will work in through the cracks and the soil.

3. In a late number that question was pretty fully answered. The shallower frames are considered better for extracting, but the deeper frames have the advantage that you can afterward use them for brood-frames if you wish.

4. The tendency nowadays seems to be in favor of board covers without quilts. The bees glue the covers down, but by using a sharp screw-driver or some other hive-tool you can easily pry them up.

Will they Winter?—Refuse to Work in Supers.

1. In June I hived a small swarm in a frame hive, giving them four frames. They went to work all right but did not breed up fast. In August I put in another swarm, and the four additional frames, and now these frames are full of honey and very little brood—virtually none. Still they have never

stored any honey in the super. Will they winter all right without any young bees? or ought I to take away the frames filled with honey and give them empties?

2. I have four or five colonies that have refused to work in supers. Do you know a remedy? TEXAS.

ANSWERS.—1. Very likely it will be just as well to leave them as they are. Of course, if the frames are so full of honey that the queen has no room to lay, then it might be well to exchange one of them for an empty one. But if you find any empty cells in the hive, or if you find brood in two or three frames, better let them alone. Queens do not generally lay a great deal after this time of year.

2. It may be that the harvest is poor. In that case it is hard to apply a remedy. If, however, other colonies are working well in supers, and these colonies have their brood-nests entirely filled, you may get them to working in supers by using bait combs. Put in the center of the super a section that has been partly drawn out. One good way is to take from a super in which bees are working well a section ¼, ½, or ¾ filled, bees and all, and put it in the super in which you want the bees to work.

Unfortunate Jumble—Drones and Egg-Fertilization.

Referring to page 438, Hon. R. L. Taylor says this in the Bee-Keepers' Review:

"There is apparently an unfortunate jumble either of the questions or of the answers, but that is not entirely clear, as one of the questions is evaded. Will the doctor please straighten out these things?"

I read over the questions and answers on page 438, until I came to the last one, "Drones and Egg-Fertilization." When I came to that I didn't wonder Mr. Taylor wanted it straightened out. But after trying it for some time I concluded I must be excused from the task. I will now, however, give the information called for in the questions, thanking Mr. Taylor for calling attention to the jumble:

Dzierzon taught that the eggs that produce drones are unfertilized. This teaching, bitterly assailed at first, has come to be generally accepted the world over. Lately, however, a small school across the water holds that all eggs are fertilized.

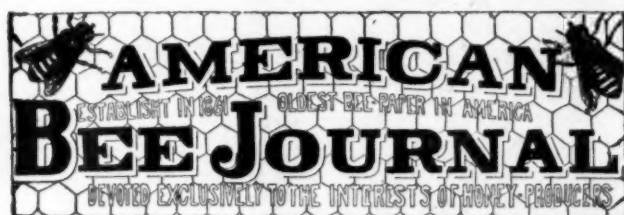
A difference of opinion prevails as to whether the fertilization of the egg is voluntary or involuntary on the part of the queen, the prevailing belief, perhaps, being that it is voluntary. C. C. MILLER.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for \$2.00; 500 for \$3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for \$1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at \$1.00), and 10 cents extra.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for \$1.25, or club it with the Bee Journal for a year—both together for only \$2.00.

See "Bee-Keeper's Guide" offer on page 621.



GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

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Membership Fee—\$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Omaha Convention Report we expect to begin next week—with the first number of the Bee Journal for October. We are expecting a good report. The convention papers we think were exceptionally interesting and valuable. We presume there will be sufficient convention material to run in our columns almost the whole of the next three months. Every member of the United States Bee-Keepers' Union will receive the Bee Journal containing the convention report in full. The Board of Directors of the Union arranged for that before leaving Omaha. There were four of the six Directors present.

City Bee-Keeping is the subject of the first article in this week's number. Mr. Schmidt refers mainly to the keeping of bees in or near the city of Cincinnati, Ohio. Within the city limits of Chicago are found many apiaries, some quite large, but of course the majority are small. They range, perhaps, from one colony up to a few having over 100 colonies.

Some fairly good yields have been secured from colonies kept in cities. Last year one colony in our own small apiary here in Chicago, produced 150 well-filled sections of honey—gathered from sweet clover. Colonies in other apiaries here may have done better, possibly.

If bees are properly handled, there need be no fear that they will molest near neighbors. Of course the inevitable mischievous boy will find the bees if any are around, and then usually the trouble begins. But it will likely also end right there, if said boy experiences fully the sitting-down qualities of a healthy worker-bee. Such an impression is generally lasting. A boy may forget many things, but ever after being

successfully pierced by a bee-sting he remembers it with great vividness whenever he finds himself again near any bees.

While it would not be well to encourage city bee-keeping to a great extent, still if kept within reasonable bounds much good will result therefrom to those who manage their bees in a proper manner.

Who is Responsible?—Referring to an item in the department of "Beedom Boiled Down," which mentioned that the Department of Criticism in the Bee-Keepers' Review was almost entirely given up to controversy between the critic and Dr. Miller, Critic Taylor says:

"I wonder who is responsible for 'Beedom Boiled Down.' The style seems strangely familiar. The writer ought to stand out squarely and meet the result of his statements. Anonymous publications are never looked upon with much favor."

Mr. Taylor is too intelligent a man to admit the thought that he is not familiar with current journalism, and it is only through mere thoughtlessness that he could have made such a remark. If he would stop to think, he would know that in his favorite daily newspaper he reads many things without signature, written by the editor, or by some one employed by him, and if he calls such writings "anonymous," then the ablest part of our ablest journals is anonymous.

The American Bee Journal stands just as responsible for "Beedom Boiled Down" as for any other editorial matter.

The Department of Criticism, in the Bee-Keepers' Review, the editor says, has been praised by some and condemned by others. One subscriber thinks the critic should be a critic in the fuller sense of the word, giving praise as well as blame. The editor says what he wanted in the department was to have errors and fallacious ideas pointed out, and where possible better plans to be given in place of the ones condemned. He now asks advice of the friends of the Review as to whether the department should be continued as at present or changed.

Shall We Grow Sweet Clover?—This question is the heading of a contribution in the Orange Judd Farmer, by Prof. L. H. Pammel, of Iowa, written in response to a sample of sweet clover sent to him. He replied as follows:

The specimen is of common sweet or Bokhara clover (*Medicago alba*). This weedy annual is a native of Europe, and has become widely naturalized in portions of the United States, especially so in the States of Ohio, Michigan, Wisconsin, Illinois, Minnesota, Iowa and eastward. It resembles alfalfa, but is easily distinguished by its taller habit and larger leaves, growing from three to eight feet high. Its flowers are small and white. This plant is a nitrogen-gatherer, produces a long and deep taproot, and hence is very valuable as a soil renovator, especially in the South. It thrives admirably upon the thin calcareous soils of the Southern States, but it is especially valuable on the old wornout prairie soils of the Cotton States.

It is equally valuable as a soil renovator in the North, but the question arises, Should it be cultivated in lieu of better forage plants? A soil in the North on which this weed grows is not only rendered fertile, but is made very porous. The strong odor of this grass renders it objectionable to cattle and stock, but they later become accustomed to it. J. G. Smith says: "But if they are turned into a field of sweet clover in the early spring, before the other clovers come up, they will quickly learn to eat it." To obtain best results in this latitude, the seed should be sown in February or March at the rate of about one-half bushel to the acre. A crop can be cut the first season.

This plant is very valuable as a honey-producer, and where it is abundant bees collect large quantities of honey. In all probability no other plant in this latitude yields as abundantly as this since the basswood and other native plants are rapidly diminishing. It is able to resist the drouth to a remarkable degree. Another point in its favor as a honey-producer is that the plant blossoms from June to frost. If

your soil is sandy your sweet clover will thrive upon it. If the soil is heavy it is also suited to this splendid plant. If the season be wet sweet clover will blossom and grow freely, and if dry its bountiful and continuous yield of honey will well repay the slight trouble incurred in planting, and your bees will be kept busy and happy all the season. The point to determine is whether it is desirable as a forage plant in the northern latitudes. If its forage qualities outweigh its woodiness then it should be tolerated. Does the farmer need it as a bee-pasture plant? He must determine all these points largely for himself. It has undoubted virtues in several directions.

We are glad to note in the foregoing that Prof. Pammel is becoming less severe than awhile ago when he condemned sweet clover so strongly. We see, however, that he still calls it a "weed." Well, some day he'll get over even that, we think.

His recommendation of sweet clover as a honey-plant is all that could be desired, and is also entirely just and right. But we believe many advise sowing the seed in the fall as well as in early spring. We should be pleased to have some advice about fall sowing, from those having experience.

Death of Miles Morton.—We learned at the Omaha convention that Mr. Miles Morton had past away on Sept. 1. Upon our return we received the following from the Secretary of the local bee-keepers' association, of which Mr. Morton had been a member:

The Cortland Bee-Keepers' Association, at a regular meeting held at Freeville, N. Y., Sept. 5, past the following resolutions:

WHEREAS, It has pleased God in his wisdom to remove from our midst our brother, Miles Morton; therefore, be it

Resolved, That we, the Cortland Union Bee-Keepers' Association, do extend our most heartfelt sympathy to the bereaved family in their hour of sorrow; and that we express our appreciation of his help and counsel in the past, as well as our sense of the loss to the Association in his demise; and be it further

Resolved, That a copy of these resolutions be published in the American Bee Journal. J. L. KINNEY, Sec.

We remember Mr. Morton very well, as we met him at the Buffalo convention last year, and it is with sincere regret that we learned of his death. Our sympathy is hereby extended to the bereaved ones, who are left to mourn his departure.

Chiefly from Mr. Morton was the idea of the fence separator obtained, he having had fences in use for 12 years past. He was an intelligent, unobtrusive sort of man, highly respected by those who knew him. We hope soon to be able to publish more about him, and also his picture.

Northern Michigan as a Honey-Field. Editor Hutchinson thinks will be an ideal location for years to come, largely on account of the willow-herb or fire-weed that grows on places where the timber has been burnt off. He cautions, however, any one who may think of locating there, and has been accustomed to the advantages of civilization, to remember that it is a new country.



BARON BELA AMBROZY reported at the big German convention last year that, by feeding honey with 50 percent water, and afterward with 30 percent, he got no satisfactory results; but using pure honey he got 3 pounds of comb for every 4 pounds fed. Doesn't that differ from reports in this country?—Gleanings.

MR. R. H. LEE, of Ashland Co., Ohio, writing us Sept. 11, said:

"Go ahead with your spelling reform. I am a little old to adopt it myself, but I like to read it. To quiet some of your critics, you might print the Lord's Prayer in a number of versions, from the earliest translation to the present, showing the changes in spelling. And, by the way, please be careful to print that grand old prayer according to the authorized version, for very few seem to know it, particularly preachers, and those who lead in religious exercises.... This has been a very poor honey-year in this part of the country."

Why, Mr. Lee, if we should print one of the earliest versions of the Lord's Prayer, scarcely any of our present subscribers could read it. There has been great progress made in reforming the spelling of the English language the past two centuries, and yet there is much more to be done in the same line. We are only aiding a good cause.

RICHARD WAGNER AS HE WAS.—The widow of Richard Wagner, some time ago, authorized her husband's lifelong friend, Houston Stewart Chamberlain, to write, with her assistance, two articles on "The Personal Side of Richard Wagner." Mr. Chamberlain undertook the work, and The Ladies' Home Journal secured the material. The articles are singularly valuable in that they give a complete picture of the man in his home and daily life, and contain much new matter, while many of the illustrations and portraits have never been printed. There will be two articles, "His Personal Side" and "How He Wrote His Operas," and the first one will appear in the October number of the magazine. Music-loving people will be pleased to know more about Wagner—one of the great composers.

MISS ADA PICKARD, of Richland Co., Wis., is perhaps the "sweetest" girl in all Wisconsin, in more ways than one. A local newspaper gave over a column account of her bee-keeping experience this year. In May, Miss Pickard took 100 colonies to form an out-apiary several miles away, and in seven weeks returned with 126 colonies and 16,000 pounds of extracted basswood honey. She cared for them all alone until the time of extracting. Miss Pickard's mother is perhaps the most extensive feminine bee-keeper in the State, having about 400 colonies. As stated in a previous number of the Bee Journal, their total crop of extracted honey this year is about 50,000 pounds.

MR. C. THEILMANN, of Wabasha Co., Minn., wrote us Sept. 19, as follows:

"If Minnesota is counted among the favorite States for this year's honey crop, then honey should bring good prices. I have about one-fourth of a mix-up crop, and that was the report from all bee-keepers except two at our State fair, and the adjourned meeting on the fair grounds. One of the two reported 50 pounds, and the other 60 pounds per colony, spring count. Both have only small apiaries."

DR. GALLUP, of Orange Co., Calif., wrote us Sept. 19, that he had sold his bees, as his time is devoted entirely to his business of healing people. Altho the Doctor is nearing 80 years of age, we are sure bee-keepers will regret to have him leave their ranks again. But let us hope he'll return again soon, for we all need the presence and help of the older heads with their rich experiences.

EDITOR ERNEST R. ROOT, of Gleanings in Bee-Culture, gave us a short call Monday evening, Sept. 19, when on his way home from the Omaha convention. He was feeling well, and seemed to be enjoying life immensely. He is chairman of Board of Directors of the United States Bee-Keepers' Union, and in every way worthy of all the honors and success attending him.

C. J. H. GRAVENHORST, editor of the Illustrierte Bienen-Zeitung, died at his home in Wilsnack, Germany, Aug. 21, at the age of 75 years. He was one of the very foremost practical bee-keepers and writers on the subject of apiculture among all the Germans. It is a great loss to the bee-keeping interests across the water.

MR. WM. BROBYN, of Weld Co., Colo., wrote us as follows Sept. 12:

"I have taken the 'Old Reliable' for three years, and will not try to get along without it as long as I can raise the necessary \$. It comes regularly every Friday afternoon."



Bees Robbing.—P. Pingrenon reports in *Revue Eclectique* that he stopt a bad case by placing vessels of honey well thinned with water a short distance from the apiary. All was quiet in a short time.

To Keep Ants from Hives.—Stuff cotton-batting in the cracks through which they enter, and the ants become entangled in it. Renew occasionally. Scatter chopt garlic in their runways.—Prakt. Wegwaiser.

Breeding for Improvement should be not by crossing bees of different varieties, but by careful and scientific selection among bees of one variety, according to E. A. Daggitt, in *Bee-Keepers' Review*. He thinks prominence should be given to color and temper in breeding for better stock.

Longevity and Quality of Queens.—The question is raised whether a queen sent through the mails will be as good and live as long as one that has not thus traveled. If travel hurts a queen, will it not be better for each one to rear his own queens? On the other hand, will the average bee-keeper rear as good queens as the experienced queen-breeder?—Gleanings.

Giving Back Combs After Extracting hinders gathering for a day or two, because cleaning and mending the combs costs time and labor, says McIntyre, in California. The reverse is true in our experience. The combs are licked up in a night, and mending the injured cells is excellent employment for the home bees. Nothing stimulates the bees more to increase activity.—Praktischer Wegwaiser.

Doolittle Plan of Queen-Rearing.—The editor of *Gleanings* is very enthusiastic over rearing queens according to the plan given in Doolittle's book. The plan was tried by their apiarist some years ago and failed. A late trial by the same man was no more successful, but a new man tried it and secured queens of the finest quality. The secret of success seems to be slow feeding all the time cell-building is going on.

Large vs. Small Hives.—"While I believe that for the bee-keeper who has a single apiary under his care, and that at home where it is constantly under his eye, a brood-nest of at least moderate capacity is best, I will admit that possibly for out-apiaries, or under any condition where neglect is likely to play a prominent part in the management, large brood-nests may be better than small ones."—*Bee-Keepers' Review* Editorial.

Prevention of Swarming.—L. A. Aspinwall has entirely prevented swarming in about 50 colonies, the main feature of his plan being that of separating the combs with dummies of peculiar construction. He has taken colonies that have swarmed under the old management, cut out the queen-cells, spread the combs with dummies, returned the bees, and there was no more swarming—the bees going promptly to work in the sections.—*Bee-Keepers' Review*.

A New Hive is described in *Gleanings* by W. K. Morrison. The description is not entirely clear, but the hive seems to have no frames, separators, section-holders, or anything of that kind, only plain sections $6\frac{1}{4} \times 1\frac{1}{4}$, the sections lying longwise, 33 in the brood-chamber and 33 in the super, the brood-chamber and super being exactly alike. The editor thinks such hives would cost very little, but doubts whether any one would be satisfied to extract from frames $6 \times 4\frac{1}{4}$.

Grading Honey.—The *Bee-Keepers' Review* quotes H. R. Boardman as opposed to grading honey into fancy and No. 1. After the "fancy" is sold, No. 1 is hard to sell and must be sold at a low figure, and no more can be had for fancy alone than for fancy and No. 1 together. Editor Hutchinson says, "I must admit that I have never practiced these Washington rules for grading. I put the 'fancy' and 'No. 1' all together, and what is lower than these grades I sell to private customers at a reduced price."

Selling-Qualities of Plain Sections.—Messrs. Niver, Aspinwall, and others, have claimed that plain sections would sell better than others. Gleanings gives a case in which the testimony was especially disinterested. The A. I. Root Co. sent a lot of honey to a commission house, one case of plain sections being in the lot. The commission men didn't seem to know what the honey was, but said they had taken an order for two or three cases from every one of their customers who had seen it, and they could use anywhere from 100 to 1,000 cases of honey in plain sections.

Large Hives Aid Prolificness.—C. P. Dadant thinks the size of the hive has something to do with prolificness of the queen. R. L. Taylor, who uses Heddon hives, says not one queen in a hundred will lay 2,500 eggs daily, continuously, for a certain period. Abbe Colin, who used still smaller hives, and who called a hive of the capacity of an 8-frame Langstroth "a hive of great dimensions," says a queen in a strong colony cannot lay more than 600 eggs a day in the good season. In keeping with that, he thinks it useless to use a super of more than 15 pounds capacity.—Gleanings.

Development of Bees.—Dubini gives the following table of days for the different stages:

	Queen.	Worker.	Drone.
Egg.....	3	3	3
Growth of larva.....	5	6	6½
Spinning cocoon.....	1	2	1½
Period of repose.....	2	2	3
Metamorphosis into chrysalis.....	1	1	1
Duration of perfectioning.....	3	7	9
Average from time egg is laid until bee emerges.....	15	21	24

Dangerous to be a Foul Brood Inspector.—F. Boomhower, foul brood inspector of Schoharie County, N. Y., thinks it about as dangerous to be inspector as to go to battle in war. He says the farmers who keep a few bees are ignorant and careless, and the regular bee-keeper suffers for their slipshod ways. They will insist they have no foul brood when their colonies are rotten with it, and when the inspector comes around they think it is only a scheme of leading bee-keepers to clear out the smaller bee-keepers so as to have a clear field. He has been threatened with clubs, fence-stakes, and shot-guns, thinks county inspection doesn't amount to much, the thing needed being a State inspector backt by a good law.—Gleanings.

The Laying of Laying-Workers.—There seems to be considerable variation in observations made as to the laying of laying-workers. Critic Taylor, in the *Bee-Keepers' Review*, quotes Devauchelle as saying laying-workers deposit eggs only in drone-cells; Dr. Miller as saying in drone-cells by preference, and in their absence in worker-cells so the work cannot be distinguished from that of a queen; Editor Hill as saying that a worker rarely lays an egg on the base of a worker-cell; while in Mr. Taylor's experience a worker generally lays in worker-cells, placing the eggs on the bottom of the cells, but so irregularly that he can distinguish the work always from that of a fertile queen in good condition. Altho neither of them mentions it, possibly all four would agree that a common practice of laying-workers is to lay a plurality of eggs in a queen-cell.

Prevention of After-Swarming.—Critic Taylor, speaking of Doolittle's plan of preventing after-swarms, said:

"Perhaps Doolittle is led to practice his method from the fact that he is largely using the Gallup hive and wishes to engage others toward a favorable opinion of that hive. In the absence of some such reason I would never follow the method he gives; because it is a laborious, time-consuming operation, at a season of the year when it is especially wise to economize both time and labor, without any corresponding advantage."

Doolittle makes a change of two words in this passage, putting "Taylor" for "Doolittle," and "Heddon" for "Gallup," and turns it upon Taylor in the September *Bee-Keepers' Review*. Says he tried for three years the Heddon-Taylor plan of moving, gradually turning the hive, and it took double the time of cutting out cells, besides the extra expense of the queen-trap. Says the term "laborious" applies particularly to the Taylor plan, even with the Heddon hive, and notes the fact that for every Heddon hive in use there are 50 to 100 of other kinds. Thinks Mrs. Harrison or Mrs. Atwell would have a hard time moving Langstroth hives; York would have trouble with chaff hives, and Taylor with tenements holding four to eight colonies, and with house-apiaries.

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GENERAL ITEMS

Honey Crop a Failure.

The honey crop is a failure in this part of the State. There is not over 10 percent of an ordinary crop. I have not seen a bee on a white clover blossom this season, and not one linden tree in five that yielded any honey, or that the bees work on at all.

Long live the American Bee Journal. I have found it a very great help to me.

J. C. BERGEN.

Humboldt Co., Iowa, Sept. 21.

The "Golden" Comb-Honey Method.

I believe that the older and more experienced bee-keepers should have the first say in the bee-papers, and also at the bee-keepers' conventions, and I have always been anxious and willing to listen to men of more experience than myself, but there might be a line drawn somewhere, I am thinking. For instance, on page 483, S. A. Deacon got after J. A. Golden about his management of the bees in the production of comb honey. I knew as soon as I read the article that he (Deacon) was trying to get Mr. Golden to go on and explain the whole method over again. Mr. Deacon must have known that every practical bee-keeper had tried, or knew all about, the Golden system of producing honey. It might be all right to get a man up to talk at a bee-keepers' convention, for instance,

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just for the fun of hearing him talk; but I don't know what to say to Mr. Deacon for trying such a trick. It is out of place in print. Give us something more practical, Mr. D.

The honey-flow has been very light in this vicinity. I got probably 20 pounds per colony, spring count, and lots of the sections are filled with honey of different colors, but I could do no better, as it took some of my best colonies all summer to fill one super, and no swarms to amount to anything, either. WM. KERNAN.

Sullivan Co., Pa., Sept. 15.

[Mr. Kernan, aren't you a trifle hard on Mr. Deacon? There are quite a number of bee-keepers who are asking for information regarding Mr. Golden's method of producing comb honey. We didn't think Mr. Deacon was too rough on Mr. Golden, and hardly think that the latter felt so, either. There is a deal of good-natured fun in that S(outh) A(frican) Deacon mixt up with his sound sense, and it will bubble over sometimes. But we are sure he intends no harm at all, only to draw people out, sometimes. —EDITOR.]

A Wheel-Ride Among Bee-Keepers.

I got home last evening from a trip on a bicycle to Minnesota. I rode something over 300 miles north of here, and saw a fine country, fine people, and had a fine time. I made the round trip in 12 days, and ate like a hired man. I got as far north as central Todd county. The basswood in Todd county is immense, but there was a worm which workt on the blossom, and so there was no nectar. One bee-keeper who had 30 or more colonies said he might have 30 pounds surplus. All complained of a poor season. J. P. BLUNCK.

Webster Co., Iowa, Sept. 18.

Keeping Worms Out of Honey.

In the Bee Journal of February 10, 1898, was a letter from Wm. C. Wolcott, telling how to keep worms out of honey, and how to get rid of laying workers. I have tried both and find they work well, the knowledge of which is worth the price of the Bee Journal for one year or more, to any bee-keeper.

I had two colonies that had become queenless, and became badly infested with worms. I removed the worms with a knife, and by exchanging frames with other hives I placed a queen in one on Sept. 5, but she did not lay. I attributed it to the weakness of the colony, and went to feeding them. In opening the hive Sept. 16, I found the queen, bees, honey and all, gone. In looking for them, I found all in the other queenless colony, doing well, and no fighting. How did they find out that that colony was queenless, and would accept them, if they do not have a language of signs?

L. W. McRAE.

Washington Co., Ala., Sept. 17.

Late Swarming—An Aster.

In answer to the inquiry "What is the latest time that bees swarm?" I would say that one year, between 1861 and 1865, I had a swarm issue Sept. 21, and another the next day, and they filled their boxes in two weeks. At that time I had square boxes, 12 inches inside measure, and eight inches

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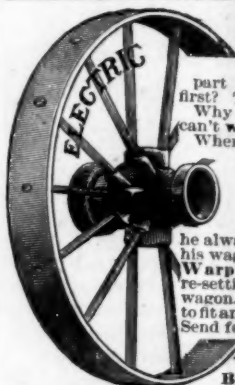
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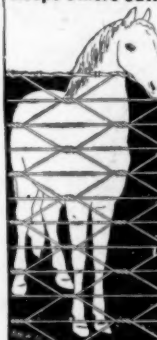
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deep, with slats between for tiering up, and had two of them together. If we could have a honey-flow like that, I presume they would do the same again.

Bees have done poorly here this year. Swarms that issued in May, some of them, will have to be fed unless they increase their stores yet.

I enclose a plant which I found growing quite plentifully on the river bottom, on which bees are working very strongly. What is it? If there is any considerable amount of it they ought to gather considerable honey from it. J. C. ARMSTRONG.

Marshall Co., Iowa, Sept. 16.

[The plant that Mr. Armstrong sends is an aster, of which there are very many varieties that bloom in September. The one in question is exceedingly common on river bottoms, and is known by some bee-keepers in central Illinois as "whiteweed." Cook says (pages 380-382): "But the numerous species of asters so widespread... are replete with precious nectar, and with favorable seasons make the apiarist, who dwells in their midst, jubilant, as he watches the bees which fairly flood the hives with the rich and delicious honey."—H. S. PEPOON, Botanist.]

Bees at Home on a Tree.

On page 213 of "Langstroth on the Honey-Bee," is a description of how bees sometimes cluster on the limbs of trees and in other places and build their homes there. I have just discovered a case of this kind while hunting bees. I hived the bees from several different directions, and the lines all crost at the same point, but I could find nothing large enough for bees to make their homes in, but on closer investigation I discovered them hanging on the underside of a hemlock top. The tree was down, being turned out by the roots, and lay about three feet from the ground. The bees had been there for months, and had about 25 pounds of honey and some brood, but no eggs and no unsealed brood. I transferred them into a hive, and as soon as they get the combs fastened well in the frames I will move them home. E. C. NOLAN.

Midland Co., Mich., Sept. 17.

An Experience with Bees—Figwort.

I have 10 colonies of bees, three of them in box-hives and seven in a hive with movable frames of my own design and manufacture. I honestly believe that I think more of bees than any one on earth. I am a bee-man (in my way) from "away back." My grandfather Carroll, one of the first settlers in Shelby Co., Mo., kept from 10 to 100 colonies all the time, and it was no unusual thing for him to go into the woods in the fall and find enough bee-trees to fill a barrel or two with honey. From him my father learned to like bees, and he kept bees for a long time, but finally lost all he had and quit.

From my earliest days I have had a fondness for bees. We still have some wild bees in the woods, and there is nothing I enjoy so much as to hunt them. Father, brother and myself found 19 bee-trees last fall, and we must have gotten close to 1,000 pounds of honey from them. I don't think we will find any this fall, as there seem to be none in the woods.

Bees are doing poorly here, or have been.

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See Honey Offer on page 619.

They seem to be storing some honey now from Spanish-needle and corn-tassel. It has been very dry, but we had a fine rain last night, and it will prolong the fall bloom. I had one swarm in July and it is doing nicely.

I would like so well to have my bees in the modern hives, but can't, as I am not able to buy them. I have tried to get them by working in the factory, or selling for some company, but have been unsuccessful so far. However, I am going to have five or 10 modern hives next spring, sure. If I can't get them any other way I will sell half my bees, and then I won't need so many hives. See? "Where there's a will there's a way," and I am sure I have the "will."

I enclose a leaf and flower of a wild weed that grows around here, and I believe the bees like it better than anything else that grows in this locality, as I have frequently seen from 25 to 50 on a single stalk. What is it?
H. S. CARROLL.

Shelby Co., Mo., Aug. 24.

[The plant sent by Mr. Carroll is commonly known by the name of "figwort," and is a plant distributed everywhere over the northern United States. It is the type of a great family of plants bearing the same title, "the Figwort family." Without question, this is one of the very best plants for the bee-keeper, and its period of blooming extends over probably two months of the summer, when honey flowers are often scarce. As I before have said of other plants, it would well repay extensive cultivation as a bee-food, and as it is perennial, once established it would largely take care of itself. Cook praises it highly as a honey-plant.—H. S. PERCEN, Botanist.]

Bees Did Fairly Well.

Bees did fairly well this season, in this part of the country. Last May I took 39 colonies on shares, and increased them to 80, by natural swarming. I have taken off 2,349 pounds of comb honey, and could have done a little better if I could have given them better attention, but I could be with them only Sundays, and each forenoon during the swarming season. Comb honey sells here for 10 cents; extracted, 6 to 8 cents.

WM. BROBYN.

Weld Co., Colo., Sept. 12.

Secured About Half a Crop.

I have not taken off all of my honey yet, but as nearly as I can estimate it, I will have about half a crop—about 20 or 25 pounds per colony, spring count; and as far as I can learn, the yield will be about the same throughout this section, some a little more and some not any.

SCOTT LAMONT.

Wabasha Co. Minn., Sept. 10.

Well Satisfied With His Bees.

My bees have been a source of pleasure and encouragement to me this year, having done better than ever I have had bees do before. I had four colonies of pure Italians in the spring, and have increased them to 14 colonies. As to the amount of honey taken, I have lost calculation, but I began taking off sections the third week in May, and continued doing so weekly up to August, and I have some of the finest

honey any one could wish to see. I ran one colony for extracted honey, and it filled 24 Hoffman frames above the brood-chamber; from the latter I would not extract.

E. L. ETHERIDGE.

British Columbia, Sept. 12.

Had a Good Season.

I am just getting started in the bee-business. We have had a good season. From 20 colonies in the spring I have taken about 1,500 pounds of honey.

G. L. VOORHEES.
Greene Co., N. Y., Sept. 14.

Clark Co., Wis., Convention.

Some of the bee-keepers of Clark county, Wis., met in Greenwood, Sept. 10, for the purpose of organizing an association to be known as the "Clark County Bee-Keepers' Association."

The following officers were elected: President, L. Allen; Vice-President, P. Kline; 2nd Vice-President, Geo. Drinkwine; Secretary, Chas. Pratt, of Greenwood; Treasurer, C. T. Haskins.

It was decided to hold the next meeting in Greenwood, Oct. 20, 1898, at which time we shall adopt a constitution, fix the annual dues of members, and transact such other business as may be necessary. All who feel interested are invited to attend.

CHAS. PRATT, Sec.

Endorses Plain Sections and Fences.

I want to speak a good word for the plain sections and fence separators. This is my first year's trial, and the result is very encouraging. I get $2\frac{1}{2}$ cents a pound more for my comb honey put in the plain sections than I do for the others. The plain are filled out much better, and are more attractive. I can get $12\frac{1}{2}$ cents a pound for these readily when the $4\frac{1}{4} \times 4\frac{1}{4}$ go begging at 10 cents a pound; in the use of these tall sections and separators I have obtained at least one-third more honey. I propose another year to use none other than the plain sections and fence separators.

L. ALLEN.

Clark Co., Wis., Sept. 13.

Light Honey Crop.

The honey crop is very light in this section—not more than one-half that of last year, but prices are a little better.

W. W. WHIPPLE.

Arapahoe Co., Colo., Sept. 14.

Thumb-Tacks Made from Dies.

I am a beginner in bee-keeping, and so have not been troubled by the record problem yet, but I was very much interested in John Atkinson's article on page 562. From past experience in another line it occurred to me that Mr. Atkinson could make his own thumb-tacks by the use of a set of steel dies. By the use of a steel die, numbers, letters, or words, can be stamped on pieces of sheet copper. For use inside the hive the numbers could be on little strips of copper long enough to bend over the top of a frame with the fingers. For outside work the corners could be turned at right angles and prest into the wood. Where rough usage was expected the little

400 Young Golden Queens...

Warranted purely mated, just started to lay. **MUST BE SOLD SOON**, so order **QUICK**. 50 cents each; 6 for \$2.75, or \$5.00 per dozen. Ten years' experience with the best of breeders, and the best of methods enables me to furnish the **BEST OF QUEENS**. Safe arrival and satisfaction guaranteed.

H. G. QUIRIN, Bellevue, Ohio.
39Atf Please mention the Bee Journal.

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J. P. H. BROWN, Augusta, Ga.
Please mention Bee Journal when writing.



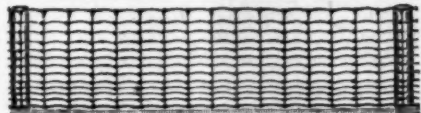
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FOR SALE OR RENT.—I will offer for a short time my Home and Apiary of 100 colonies. It is in the best location in Wisconsin. For particulars inquire of 39Atf J. MESSINGER, ELROY, Wis.

metal tabs could be nailed on. Sheet copper can be procured from the nearest tinner. I forgot where I bought my dies, or stamps, as they are sometimes called, but the Root Co. will get them for you.

Ashland Co., Ohio.

R. H. LEE.

Best Crop in Six Years.

I will get the best crop of honey this year that I have had for six years, and I am selling it for $12\frac{1}{2}$ cents per section, by the case. I took 84 sections of honey from one colony, and have one with 105 sections about ready to come off. The bees work strong on the heart's-ease, and will until frost kills it.

SAMPSON STOUT.

Sumner Co., Kan., Sept. 16.

Short Honey-Flows.

The spring and summer flow of honey was very short, and of very poor quality. The fall flow is better, and of good quality. White clover seemed to yield no honey at all, or not enough to be noticed in with the dark honey.

EDW. SMITH.

Madison Co., Ill., Sept. 16.

Report for the Past Season.

I have taken only 268 nice, finished sections of honey from 24 colonies, and sold them for \$67 cash. Now, I have 39 colonies with plenty of honey for winter. I sell my honey in the home market, by peddling it.

E. B. KAUFFMAN.

Lancaster Co., Pa., Sept. 9.

Convention Notices.

Wisconsin.—The annual meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Lone Rock, Wis., Oct. 5 and 6, 1898. All bee keepers are requested to make an effort to attend. A large attendance and instructive meeting are expected.

Calamine, Wis.

F. L. MURRAY, Sec.

Tennessee.—The Southern East Tennessee Bee-Keepers' Association will hold its 4th annual meeting at Cookson's Creek, Polk Co., Tenn., Thursday, Oct. 6, 1898. There will be an interesting program for discussion. All friends of the Association are cordially invited to attend, and especially should the membership be present. Open at 9 a.m.

Fetzeron, Tenn. W. J. COPELAND, Sec.

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BEE-BOOKS

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George W. York & Co.,
Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiculturist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, \$1.00.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth. Price, postpaid, \$1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 400 pages; bound in cloth and fully illustrated. Price, postpaid, \$1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, \$1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopedia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 800 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

National Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 250 pages; bound in paper covers, \$1.00.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principles portion of the book called **BEES OF HONEY**. 101 page pamphlet. Price, 40 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers. This book gives the latest, most approved methods of bee-keeping, in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50c.

Bee-Keeping for Beginners, by Dr. J. F. H. Brown, of Georgia. A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cents.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p., illustrated. 25c.

Convention Hand-Book, for Bee-Keepers, by Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Practical Hints to Bee-Keepers—by CHAS. F. MUTH.—Also contains a Foul Brood Cure and How to Winter Bees. 40 p.; 10 cts.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from **BEES AND HONEY**. Price, 10 cents.

Bee-Pasturage a Necessity.—This book suggests what and how to plant. It is a chapter from **BEES AND HONEY**. Price, 10 cents.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Winter Problem in Bee-Keeping, by G. A. Pierce. Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price 10 cts.

Hand-Book of Health, by Dr. Foote.—Hints about eating, drinking, etc. Price, 25 cts.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for \$2.00; 500 for \$3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2, in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

Green's Four Books, by Chas. A. Green.—Devoted to, 1st. How We Made the Old Farm Pay; 2nd. Peach Culture; 3rd. How to Propagate Fruit-Plants, Vines and Trees; 4th. General Fruit Instructor. Nearly 120 pages. Fully illustrated. 25 cts.

Garden and Orchard, by Chas. A. Green.—Gives full instructions in Thinning and Marketing Fruits; Pruning, Planting and Cultivating; Spraying, Evaporation, Cold Storage, Etc. 94 pages, illustrated. Price, 25 cts.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Kendall's Horse-Book.—35 pictures, showing positions of sick horses, and treats on all their diseases. English or German. Price, 25 cts.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in operation at the Michigan Agricultural College. Price, 25 cts.

Lumber and Log-Book.—Gives measurements of lumber, logs, planks; wages, etc. 25c.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook.—Full instructions. Price, 35 cts.

Grain Tables, for casting up the price of grain, produce, hay, etc. Price, 25 cts.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 30 cts.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Rural Life.—Bees, Poultry, Fruits, Vegetables, and Household Matters. 100 pages. 25 cts.

Potato Culture, by T. B. Terry.—It tells how to grow them profitably. Price, 40 cts.

Book Clubbing Offers.

(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only one book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1. Langstroth on the Honey-Bee.....\$2.00
2. A B C of Bee-Culture.....2.00
3. Bee-Keepers' Guide.....1.75
4. Bees and Honey (Cloth bound).....1.65
5. Doolittle's Scientific Queen-Rearing.....1.75
6. Dr. Howard's Foul Brood Book.....1.10
7. Advanced Bee-Culture.....1.30
8. Bienen-Kultur [German].....1.20
11. Rational Bee-Keeping [Paper bound].....1.75
13. Bee-Keeping for Profit.....1.15
14. Convention Hand-Book.....1.15
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32. Hand-Book of Health.....1.10
34. Maple Sugar and the Sugar Bush.....1.20
35. Silo and Silage.....1.10
36. Winter Problem in Bee-Keeping.....1.30
37. Apiary Register (for 50 colonies).....1.75
38. Apiary Register (for 100 colonies).....2.00

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Sept. 20.—Honey of all kinds is selling well, with the best grades of white steady at 12c; a little fancy white clover has brought 13c. Off grades of white to amber, 10 to 11c; the dark shades, 8 to 9c. Extracted, 6 to 7c for white; ambers, 5 to 6c; and dark, 5c. Beeswax steady at 27c.

R. A. BURNETT & CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c; A No. 1 white, 10 to 11c; No. 1 white, 8 to 10c; dark and partially filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 8½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12½ to 13c; No. 1, 11 to 12c; amber, 10 to 11c. Extracted, white, 5½ to 6c; amber, 5 to 5½c; dark, 4½ to 5c. Beeswax, 22 to 25c.

The receipts of comb honey are larger.

C. O. ULEMONS & CO.

Columbus, O., Sept. 23.—Fancy white comb, 14 to 15c; No. 1 white, 13 to 13c; No. 2 white, 10 to 11c; fancy amber, 10 to 11c.

Fancy white continues scarce and wanted. Those having any to market will please correspond with us.

COLUMBUS COM. AND STORAGE CO.

New York, Sept. 1.—We have a good demand for new crop comb honey, and it is beginning to arrive. Have sold some shipments at 14 to 15c for fancy white, 12 to 13c for No. 1 white, and 10 to 11c for fair white. We think these will be about the ruling prices this fall; exceptional fine lots may sell at a little more. Extracted is in good demand at unchanged prices. Beeswax dull at 26 to 27c.

HILBRETH BROS. & SEIGLER.

Boston, Sept. 16.—Fancy white in cartons, 14c; A No. 1, 12½ to 13c; No. 1, 11 to 12c; No. 2, 10 to 12c. California extracted is practically out of the market. Florida in barrels is selling from 6 to 7 cts., according to quality. Beeswax, 26 to 27c. Very light stock; only fair demand.

The fall demand for honey is now opening, and from present indications we look for good prices right through the season.

BLAKE, SCOTT & LEE.

Indianapolis, Sept. 1.—Fancy white comb honey, 12½ to 13c; No. 1, 10 to 11c. Extracted, white, 6 to 7c. Beeswax, 25 to 27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff.

WALTER S. POWDER.

Milwaukee, Sept. 20.—Fancy comb, 12 to 12½c; A No. 1, 11 to 12c; No. 1, 10 to 11c; dark and amber, 8 to 10c. Extracted, in barrels and kegs, white, 5½ to 6c; dark, 5 to 5½c. Beeswax, 25 to 26c.

The condition of this market for honey is favorable for shippers of good quality either in comb or extracted, and the receipts, while they are with us very fair, are not as liberal as may be, while the demand is very fair at our quotations. We advise liberal shipments of 1-pound sections and extracted.

A. V. BISHOP & CO.

Buffalo, Sept. 16.—There is quite an improved demand for honey at present, and moderate amounts can be sold of strictly fancy 1 pound comb at 11 to 12c; lower grades range from 10c downward. We advise but moderate shipments for awhile yet. Extracted—average grades could be sold at 4 to 5c. Fancy beeswax, 27 to 28c; common, 20 to 25c.

BATTERSON & CO.

San Francisco, Sept. 14.—White comb, 9 to 9½c; amber, 7 to 8½c. Extracted, white, 6½ to 6¾c; light amber, 5½ to 6c. Beeswax, 24 to 27c.

Stocks are light of both comb and extracted, but more especially so of choice extracted, the latter being in most active request. Market is firm at the quotations, with holders disposed in most instances to ask somewhat higher figures.

Cleveland, Sept. 1.—Fancy white, 13 to 14c; No. 1, white, 12 to 12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light.

A. B. WILLIAMS & CO.

Detroit, Sept. 24.—Fancy white, 11 to 12c; A No. 1, 10 to 11c; No. 1, 10c; fancy dark or amber, 9 to 10c; other grades, 8 to 9c. Extracted, white, 6 to 6½c; dark or amber, 5 to 5½c. Beeswax, 25 to 26c.

M. H. HUNT.

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